

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H04L12/56

PCT/PTO 06 OCT 2004

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 208 667 B1 (CALDARA STEPHEN A ET AL) 27 March 2001 (2001-03-27)  column 1, line 18 - line 34 column 2, line 41 - line 65 column 3, line 59 - column 4, line 52 column 5, line 22 - line 37 column 6, line 2 - line 45 column 7, line 23 - column 11, line 31 figures 4,6	1-4, 6-13,15, 16
Y		5
A		14

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
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- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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Date of the actual completion of the international search

24 July 2003

Date of mailing of the international search report

06/08/2003

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 978 968 A (VITESSE SEMICONDUCTOR CORP) 9 February 2000 (2000-02-09) paragraph '0004! - paragraph '0006! paragraph '0008! paragraph '0011! - paragraph '0015! paragraph '0016! paragraph '0021! - paragraph '0022! paragraph '0034! paragraph '0040! paragraph '0043! - paragraph '0051! figures 5A, 5B -----	1, 10, 16
Y	US 6 215 412 B1 (FRANASZEK PETER ANTHONY ET AL) 10 April 2001 (2001-04-10) column 1, line 52 -column 2, line 37 -----	5
A	US 6 275 468 B1 (STEINBRENNER KURT ET AL) 14 August 2001 (2001-08-14) column 1, line 66 -column 2, line 12 column 4, line 11 -column 5, line 3 -----	1, 10, 16

## INTERNATIONAL SEARCH REPORT

on patent family members

Intern Application No

PCT/IB 03/01401

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6208667	B1	27-03-2001	AU 9399998 A	05-04-1999
			EP 1016233 A1	05-07-2000
			JP 2002505533 T	19-02-2002
			WO 9914876 A1	25-03-1999
EP 0978968	A	09-02-2000	US 6377575 B1	23-04-2002
			EP 0978968 A2	09-02-2000
			JP 2000078204 A	14-03-2000
			US 2002061016 A1	23-05-2002
			US 2002075845 A1	20-06-2002
US 6215412	B1	10-04-2001	AT 207219 T	15-11-2001
			DE 69232127 D1	22-11-2001
			DE 69232127 T2	06-06-2002
			EP 0505695 A2	30-09-1992
			EP 0505779 A2	30-09-1992
			EP 0505780 A2	30-09-1992
			EP 0505781 A2	30-09-1992
			EP 0505782 A2	30-09-1992
			EP 0506135 A2	30-09-1992
			EP 0506136 A2	30-09-1992
			JP 2500973 B2	29-05-1996
			JP 4345242 A	01-12-1992
			US 5680402 A	21-10-1997
			US 5612953 A	18-03-1997
			US 5654695 A	05-08-1997
			US 5617547 A	01-04-1997
			US 5250943 A	05-10-1993
			US 5365228 A	15-11-1994
			US 5404461 A	04-04-1995
			US 5742761 A	21-04-1998
			US 5444705 A	22-08-1995
			US 5408646 A	18-04-1995
			US 5495474 A	27-02-1996
			US 5734826 A	31-03-1998
			US 5920704 A	06-07-1999
			US 5384773 A	24-01-1995
			US 5442772 A	15-08-1995
US 6275468	B1	14-08-2001	BR 9704107 A	26-01-1999
			CN 1172387 A	04-02-1998
			DE 19731476 A1	05-02-1998
			GB 2315960 A	11-02-1998